

### CLAIMS

1. A method for the methane fermentation treatment of an organic wastewater containing a sulfur compound, comprising the steps of:
  - 5 adding an oxidizing agent to the organic wastewater to oxidize the sulfur compound contained therein to molecular sulfur;
  - subjecting the organic wastewater after said oxidizing step to an anaerobic treatment for the methane fermentation thereof; and
  - controlling the feeding rate of the oxidizing agent to be added to  
10 the wastewater using as an indicator the concentration of the residual oxidizing agent in the water flowing into said anaerobic treatment step and/or the concentration of hydrogen sulfide in a biogas generated.
2. The methane fermentation treatment method as recited in claim 1,  
15 wherein at least one member selected from ozone, hydrogen peroxide, sodium hypochlorite and a bromine based oxidizing agent is used as the oxidizing agent.
3. The methane fermentation treatment method as recited in claim 1  
20 or 2, wherein, when the concentration of hydrogen sulfide in a biogas generated in the anaerobic treatment step is used as said indicator, the oxidizing agent is added such that the concentration of hydrogen sulfide is 3 % or less.
- 25 4. The methane fermentation treatment method as recited in claim 1 or 2, wherein, when the concentration of the residual oxidizing agent in the water flowing into said anaerobic treatment step is used as said indicator, the oxidizing agent is added on the basis of at least one of the indicated values selected from the residual ozone concentration, the  
30 residual hydrogen peroxide concentration, the residual chlorine

concentration and the residual bromine concentration in the wastewater and the oxidation and reduction potential of the waste water.

5. An apparatus for the methane fermentation treatment of an organic wastewater containing a sulfur compound, comprising:
- an oxidation reactor in which an oxidizing agent is added to the organic wastewater and is reacted therewith; and
  - a methane fermentation reactor in which the waste water subjected to the oxidation treatment is subjected to a methane fermentation treatment,
- said methane fermentation reactor being provided with:
- at least one of means for measuring the concentration of the residual oxidizing agent in the water flowing into said methane fermentation reactor and means for measuring the concentration of hydrogen sulfide in a gas generated in said methane fermentation reactor;
  - and
  - control means for controlling the feeding rate of the oxidizing agent to be added on the basis of the measured value.